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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/674,982	09/29/2003	Jeongnam Youn	080398.P563	4997

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EXAMINER	
SHORTLEDGE, THOMAS E	
ART UNIT	**PAPER NUMBER**
2654	

DATE MAILED: 12/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/674,982	YOUN, JEONGNAM	
	Examiner	Art Unit	
	Thomas E. Shortledge	2654	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *29 June 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. Claims 1-12 and 21 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 1-12 and 21 define non-statutory process because they merely manipulate an abstract idea (manipulating data) without a claimed limitation to a practical application. The disclosed invention has a practical application in the technological arts (grouping short windows); however, the claimed process, a series of steps, simply manipulates data without a claimed limitation to the practical application and does not have any post or pre-computer process activity.

A review of application 10/674982 shows the disclosed invention thereof to be a method and apparatus for grouping short windows. This is a practical application within the technological arts. However, it does not disclose specific hardware, specific software, or a combination thereof for performing the claimed functions. The steps that formed the claimed process are devoid of any limitations to any practical application.

In the instant application the disclosure is directed to any and every structure for carrying out the claimed functions, and not solely to specific structure.

As can be seen by claims 1-12 and 21 these claims recite directly a manipulation of data by setting for the step of "identifying one ore more short windows of a first type...; grouping the one or more short windows of the first type and the one or more short windows of the second type...; and if a number of short windows in one of the two preliminary groups exceeds a threshold number, further grouping short windows in the one of the two preliminary groups." These steps only manipulate data.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-4, 9, 11 and 13-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Domazet et al. (Advanced Software Implementation of MPEG-4 AAC Audio Encoder) in view of Araki (6,456,963).

As to claims 1, 13 and 21, Domazet et al. teach:

identifying one or more short windows of a first type and one or more short windows of a second type within a frame of data using energy associated with each of a plurality of short windows within the frame (grouping short windows into different groups

with short windows with same scalefactors grouped together, the scalefactors being signal energy, page 680, paragraphs 4-5);

grouping the one or more short windows of the first type and the one or more short windows of the second type into two preliminary groups based on a window type of each of the plurality of short windows (grouping short windows with the same scalefactors into like groups, page 680, paragraphs 4-5); and

Domazet et al. teach creating numerous groups for grouping the short windows, (page, 680, paragraphs 4-5).

Domazet et al. does not if a number of short windows in one of the two preliminary groups exceeds a threshold number, further grouping short windows in the one of the two preliminary groups into at least two groups.

However, Araki teach when the number of groups is too small with respect to the number of blocks, the sound quality is degraded, where it would be obvious to one of ordinary skill in the art that since numerous groups are available for grouping the short windows, and groups that are too small degrade the sound quality, the groups that are too small would be divided to further create smaller groups increasing the sound quality, without adversely affecting the encoding process (col. 3, lines 26-51).

Therefore it would be obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Domazet et al. with the methods Araki to create smaller groups, when groups are found to be too large, allowing an increase in the sound quality, as taught by Araki (col. 3, lines 45-51).

As to claim 17, Domazet et al. teach:

a memory; and at least one processor coupled to the memory, the at least one processor executing a set of instructions (encoding using a AMD Athlon^{tm} XP +1600 processor (1400 MHz), with the encoder configured to encode the signal, including a process of grouping short windows (page 683, section 3.2), where it would be necessary for a memory to be used to store the process and instruct the processor how to encode the signal);

identifying one or more short windows of a first type and one or more short windows of a second type within a frame of data using energy associated with each of a plurality of short windows within the frame (grouping short windows into different groups with short windows with same scalefactors grouped together, the scalefactors being signal energy, page 680, paragraphs 4-5);

grouping the one or more short windows of the first type and the one or more short windows of the second type into two preliminary groups based on a window type of each of the plurality of short windows (grouping short windows with the same scalefactors into like groups, page 680, paragraphs 4-5); and

Domazet et al. teach creating numerous groups for grouping the short windows, (page, 680, paragraphs 4-5).

Domazet et al. does not if a number of short windows in one of the two preliminary groups exceeds a threshold number, further grouping short windows in the one of the two preliminary groups into at least two groups.

However, Araki teach when the number of groups is too small with respect to the number of blocks, the sound quality is degraded, where it would be obvious to one of ordinary skill in the art that since numerous groups are available for grouping the short windows, and groups that are too small degrade the sound quality, the groups that are too small would be divided to further create smaller groups increasing the sound quality, without adversely affecting the encoding process (col. 3, lines 26-51).

Therefore it would be obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Domazet et al. with the methods Araki to create smaller groups, when groups are found to be too large, allowing an increase in the sound quality, as taught by Araki (col. 3, lines 45-51).

As to claims 2, 14 and 18, Domazet et al. teach the plurality of short windows within the frame consists of eight short windows (page 680, paragraph 4).

As to claims 3, 15 and 18, Domazet et al. teach determining a final number of short window groups for the frame (grouping the short windows based on their energy, and once all the short windows are grouped based on similarity, the final number of short window groups is determined, page 680, paragraph 4).

As to claims 4, 16 and 19, Domazet et al. teach determining a number of short windows in each of the final number of short window groups (grouping the short

windows based on their energy, and once all the short windows are grouped, the total number of short windows in each group would be determined, page 680, paragraph 4).

As to claim 9, Domazet et al. teaches adjusting a type of each of the plurality of short windows whose type is likely to be incorrect to match the type of adjacent short windows if the adjacent short windows are of the same type (creating groups of similar types if adjacent short windows are found to have energies within a threshold value, page 680, paragraph 4-5).

As to claim 11, Domazet et al. do not teach the threshold number is any one of a predetermined number and a number short windows in the other one of the two preliminary groups.

However, Araki teaches when the number of groups is too small with respect to the number of blocks, the sound quality is degraded, where it would be obvious to one of ordinary skill in the art that since numerous groups are available for grouping the short windows, and groups that are too small degrade the sound quality, the groups that are too small would be divided to further create smaller groups increasing the sound quality, without adversely affecting the encoding process and to further create the groups, a threshold value would be used to properly determine group size (col. 3, lines 26-51).

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See PTO-892.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas E. Shortledge whose telephone number is (571)272-7612. The examiner can normally be reached on M-F 8:00 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richemond Dorvil can be reached on (571)272-7602. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TS
11/17/2005

VIJAY CHAWAN
PRIMARY EXAMINER